

METHOD AND APPARATUS FOR SENSING THE ANGULAR POSITION OF A ROTATING MEMBER

Abstract of Disclosure

A flexible quadrature coil circuit is provided for use in an electronically commutated dynamoelectric machine for sensing the angular rotational position of a rotor relative to a stator. The stator has a plurality of stator teeth, with each tooth having an inwardly facing arcuate surface with at least one elongated rib and a channel disposed along a vertical axis of the tooth. The flexible circuit includes a flexible electrically nonconductive substrate with at least one slot formed in the substrate. The slot is configured to receive the corresponding rib so as to releasably secure the substrate to the arcuate surface of the stator tooth. At least one continuous electrical conductor is embedded in the substrate in a serpentine manner so that the continuous conductor forms a plurality of spaced apart conductor portions disposed between selected slots. The conductor portions are vertically aligned with and are received into the channel of the stator tooth when the flexible substrate is secured to the arcuate surface of selected stator teeth.

Figures

10063451